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| 09/779,869 | 02/08/2001 | Steven M. Horowitz | 14531.79 | 6689 |
| 47973* 7590 02/06/2008 WORKMAN NYDEGGER/MICROSOFT 1000 EAGLE GATE TOWER 60 EAST SOUTH TEMPLE SALT LAKE CITY, UT 84111 | | | EXAMINER PARRY, CHRISTOPHER L | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/779,869

Applicant(s)

HOROWITZ ET AL.

Examiner

Chris Parry

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17 and 20-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17 and 20-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/ are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 17 and 20-26 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claim 26 is objected to because of the following informalities: On line 29 of claim 26, "means for enabling a user to selectively record the encoded data the particular channel" should be changed to --means for enabling a user to selectively record the encoded data on the particular channel--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 17, 20, 21, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sie et al. "Sie" (USPN 7,024,679) [of record] in view of Ten Kate et al. "Ten Kate" (USPN 6,601,237) and further in view of Hicks III et al. "Hicks" (US Pub No. 2004/0261112) [of record].

Regarding Claim 17, Sie discloses a system for receiving digital programming content comprised of multiple channels (Col. 4, lines 56-61), and wherein the programming content of each channel is provided in an encoded digital format (e.g., MPEG-2) determined by the provider of the content (Col. 3, lines 62-67), the system including an apparatus for recording one or more selected channels without decoding them prior to recording so as to store them in the same encoded digital format as determined by the content provider in order not to degrade the recording quality of the selected channels, the apparatus comprising:

an entertainment system (see figures 5 & 6) for receiving (Col. 6, lines 4-9), isolating (Col. 6, lines 26-28), and storing (Col. 7, lines 35-36, 45-48) a first channel of digital programming content (Col. 6, lines 26-28) while decoding (Col. 6, lines 32-37)...a second channel of digital programming content (Col. 13, lines 36-42, Col. 14, lines 20-37), the entertainment system comprising:

a display device (e.g., a television) for displaying programming content of a selected channel (Col. 5, lines 65-67); and

a set top box (120 – figure 5) configured to receive a multiplexed signal (Col. 6, lines 1-14) containing multiple channels (Col. 6, lines 24-27) of digital programming content (Col. 6, line 43-51), wherein the digital programming content of each channel received at the set top box is encoded in a digital format (Col. 6, lines 24-31) that is determined by a content provider (Col. 3, lines 62-67), the set top box being further configured to isolate a first channel of digital programming content (Col. 6, lines 26-28) and display the first channel (Col. 6,

lines 32-39) or a second channel on the display device (Col. 6, lines 49-53), the set top box including:

a single tuner (508 – figure 5; 500 – figure 6) and a demodulator (512 – figure 5; 500 – figure 6) (Col. 6, lines 1-6) adapted for receiving and operating on a multiplexed signal (Col. 6, lines 12-20) containing the digital programming content to identify multiple channels within the multiplexed signal (Col. 6, lines 14-26) and which contain the digital programming content (Col. 6, lines 49-51), wherein the demodulator (512 – figure 5) is connected to the tuner (508 – figure 5; as shown in figure 5) so as to receive a tuned signal directly therefrom, the demodulator further being adapted to produce a multiplexed transport stream (Col. 6, lines 18-21) comprising audio, video and data packets associated with a plurality of channels (Col. 16, lines 9-11);

a transport demultiplexer (516 – figure 5; 500 – figure 6) coupled to the demodulator and adapted to receive the multiplexed transport stream...and to demultiplex the plurality of channels of the transport stream in order to permit selection of the first channel (Col. 6, lines 24-30), the transport demultiplexer being capable of selecting a channel encoded in a plurality of digital formats (Col. 16, lines 5-11);

a storage device (132 – figure 6) (Col. 7, lines 35-40) coupled to the transport demultiplexer (500 – figure 6; 516 – figure 5) for recording the first channel (Col. 7 lines 45-46) without decoding it (selected channels

are stored prior to decoding at display interface 524, Col. 7, lines 45-48) so as to store the first channel as it was received at the set top box, such that the digital format in which the digital content of the first channel is stored may be determined from the content provider, the storage device storing the first channel using the same digital format (Col. 6, lines 30-31, Col. 13, lines 39-42) with which the at least one channel was received at the set top box and as provided by the content provider (Col. 3, lines 62-67), and in order to store the digital content of the at least one channel without degrading it, wherein the storage device can receive content encoded in any of the plurality of digital formats from the transport demultiplexer (Col. 7, lines 57-61); and

a decoder (524 – figures 5 & 6) connected to the storage device (132 – figure 6) for decoding digital programming content (Col. 6, lines 34-37) of the second channel (Col. 13, lines 39-42) and coupled to the transport demultiplexer (516 – figure 5; 500 – figure 6), wherein the digital programming content of the second channel was stored on the storage device prior to decoding (Col. 13, lines 39-42, Col. 14, lines 20-37), and the decoder is adapted to decode the digital programming content of the second channel into an analog format (Col. 6, lines 32-42, Col. 13, lines 39-42) at the same time that the storage device records the first channel (Col. 14, lines 31-37).

However, Sie fails to disclose an entertainment system for receiving isolating and storing a first channel of digital programming content while decoding and displaying a second channel of digital programming content; a transport demultiplexer coupled to the demodulator and adapted to receive the multiplexed transport stream directly from the demodulator; and means for enabling a user to select and record the digital content of the first channel while watching the decoded digital programming content of the second channel.

In an analogous art, Ten Kate discloses a system (figure 1) for receiving digital programming content comprised of multiple channels (Col. 3, lines 36-55), the system comprising: a transport demultiplexer (4 – figure 1) coupled to the demodulator (3 – figure 1) and adapted to receive the multiplexed transport stream directly from the demodulator (as shown in figure 1) and to demultiplex the plurality of channels of the transport stream in order to permit selection of the first channel, the transport demultiplexer being capable of selecting a channel encoded in a plurality of digital formats (Col. 3, lines 48-55 and Col. 4, lines 27-31). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system disclosed by Sie to include a transport demultiplexer coupled to the demodulator and adapted to receive the multiplexed transport stream directly from the demodulator as taught by Ten Kate, for the benefit of selecting a desired channel based on instructions received directly from the demodulator and increasing system usability.

The combination of Sie and Ten Kate are silent on disclosing an entertainment system for receiving isolating and storing a first channel of digital programming content

while decoding and displaying a second channel of digital programming content; and means for enabling a user to select and record the digital content of the first channel while watching the decoded digital programming content of the second channel.

In an analogous art, Hicks discloses a system (figure 1) for receiving digital programming content comprised of multiple channels (§ 38-42), the system comprising: an entertainment system (110 – figure 2) for receiving isolating and storing a first channel of digital programming content while decoding and displaying a second channel of digital programming content (§ 46).

Hicks further discloses means for enabling a user to select and record the digital content of the first channel while watching the decoded digital programming content of the second channel (§ 22, 46, and 56). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Sie and Ten Kate to include an entertainment system for receiving isolating and storing a first channel of digital programming content while decoding and displaying a second channel of digital programming content; and means for enabling a user to select and record the digital content of the first channel while watching the decoded digital programming content of the second channel as taught by Hicks for the benefit of preventing the user from missing a second program that was broadcasted at the same time as a first program by facilitating recording a second program to allow for playback at a later point in time.

As for Claim 20, the combination of Sie, Ten Kate, and Hicks disclose, in particular Sie teaches, wherein the decoder (524 – figures 5 & 6) is coupled to the transport demultiplexer (516 - figure 5; 500 – figure 6) so that a selected first channel output from the demultiplexer may be simultaneously directed to both the storage device and the decoder (see figure 6).

As for Claim 21, the combination of Sie, Ten Kate, and Hicks disclose, in particular Sie teaches, an apparatus as defined in claim 17, further comprising a conditional access system (controller 612 – figure 6) for determining whether a selected channel may be displayed (Col. 7, lines 48-52 and Col. 8, line 64 to Col. 9, line 3).

Regarding Claim 26, Sie discloses in a set-top box (120 – figure 5; figure 6) for receiving digital programming content comprised of multiple channels (Col. 6, lines 24-26), and wherein the programming content of each channel is provided to the set top box in an encoded digital format determined by the provider of the content (Col. 3, lines 62-67), a system for recording one or more selected channels without decoding them prior to recording so as to store them in the same encoded format as determined by the content provider in order not to degrade the recording quality of the selected channels, and thereby also permitting display of one of the recorded channels while recording another one of the selected channels, the system consisting of:

a single tuner (508 – figure 5) for tuning a multiplexed signal (Col. 6, lines 1-6) received at the set top box to a particular transponder of a content provider's content delivery system (Col. 6, lines 1-21);

a demodulator (512 – figure 5) coupled to the single tuner (508 shown in figure 5) to receive the tuned multiplexed signal directly from the tuner, the demodulator being adapted to demodulate the tuned signal and output a multiplexed transport stream containing at least one channel of audio and video data (Col. 6, lines 18-21);

a transport demultiplexer (516 – figure 5) coupled to the demodulator (512 – figure 5)...the transport demultiplexer being adapted to demultiplex the transport stream and isolate a particular channel of video and audio data (Col. 6, lines 24-30);

a storage medium (132 – figure 6) coupled to the transport demultiplexer (500 – figure 6; 516 – figure 5) to receive and store the particular channel of video and audio data from the transport demultiplexer in an encoded format that is the same as an encoded format in which the particular channel is received by the tuner (Col. 7, lines 35-63);

a decoder (524 – figures 5 & 6) coupled to the transport demultiplexer (516 – figure 5; 500 – figure 6) and to the storage medium (132 – figure 6), wherein the decoder is adapted to:

when encoded data of the particular channel is being stored in the storage medium, access previously stored encoded data from the storage medium and decode the previously stored encoded data into a displayable format (Col. 7, lines 44-52); and

when encoded data of the particular channel is not being stored in the storage medium, receive the particular channel of video and audio data directly from the transport demultiplexer, and decode the particular channel of video and audio data as it is received into the displayable format (Col. 6, lines 32-62).

However, Sie fails to explicitly disclose a transport demultiplexer coupled to the demodulator so as to receive the multiplexed transport stream directly from the demodulator, the transport demultiplexer being adapted to demultiplex the transport stream and isolate a particular channel of video and audio data and means for enabling a user to selectively record the encoded data the particular channel while simultaneously decoding the previously stored encoded data for display to the user.

In an analogous art, Ten Kate discloses a system (figure 1) for receiving digital programming content comprised of multiple channels (Col. 3, lines 36-55), the system comprising: a transport demultiplexer (4 – figure 1) coupled to the demodulator (3 – figure 1) so as to receive the multiplexed transport stream directly from the demodulator, the transport demultiplexer being adapted to demultiplex the transport stream and isolate a particular channel of video and audio data (Col. 3, lines 48-55 and Col. 4, lines 27-31). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system disclosed by Sie to include a transport demultiplexer coupled to the demodulator and adapted to receive the multiplexed transport stream directly from the demodulator as taught by Ten Kate, for the benefit of selecting a desired channel based on instructions received directly from the demodulator and increasing system usability.

The combination of Sie and Ten Kate are silent on disclosing means for enabling a user to selectively record the encoded data the particular channel while simultaneously decoding the previously stored encoded data for display to the user.

In an analogous art, Hicks discloses a system (figure1) for receiving digital programming content comprised of multiple channels (§ 38-42), the system comprising: means for enabling a user to selectively record the encoded data the particular channel while simultaneously decoding the previously stored encoded data for display to the user (§ 22, 46, and 56). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Sie and Ten Kate to include means for enabling a user to selectively record the encoded data the particular channel while simultaneously decoding the previously stored encoded data for display to the user as taught by Hicks for the benefit of preventing the user from missing a second program that was broadcasted at the same time as a first program by facilitating recording a second program to allow for playback at a later point in time.

5. Claims 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sie in view of Ten Kate.

Regarding Claim 22, Sie discloses in a set-top box (120 – figure 5; figure 6) for receiving digital programming content comprised of multiple channels (Col. 6, lines 24-26), and wherein the programming content of each channel is provided to the set top box in an encoded digital format determined by the provider of the content (Col. 3, lines 62-67), a system for recording one or more selected channels without decoding them

prior to recording so as to store them in the same encoded format as determined by the content provider in order not to degrade the recording quality of the selected channels, and thereby also permitting display of one of the recorded channels while recording another one of the selected channels, the system comprising:

a single tuner (508 – figure 5) for tuning a multiplexed signal (Col. 6, lines 1-6) received at the set top box to a particular transponder of a content provider's content delivery system (Col. 6, lines 1-21);

a demodulator (512 – figure 5) coupled to the single tuner (508 shown in figure 5) to receive the tuned multiplexed signal directly from the tuner, the demodulator being adapted to demodulate the tuned signal and output a multiplexed transport stream containing at least one channel of audio and video data (Col. 6, lines 18-21);

a transport demultiplexer (516 – figure 5) coupled to the demodulator (512 – figure 5)...the transport demultiplexer being adapted to demultiplex the transport stream and isolate a particular channel of video and audio data (Col. 6, lines 24-30);

a storage medium (132 – figure 6) coupled to the transport demultiplexer (500 – figure 6; 516 – figure 5) to receive and store the particular channel of video and audio data directly from the transport demultiplexer in an encoded format that is the same as an encoded format in which the particular channel is received by the tuner (Col. 7, lines 35-63); and

a decoder (524 – figures 5 & 6) coupled to the transport demultiplexer (516 – figure 5; 500 – figure 6) and to the storage medium (132 – figure 6), wherein the decoder is adapted to:

when encoded data of the particular channel is being stored in the storage medium, access previously stored encoded data from the storage medium and decode the previously stored encoded data into a displayable format (Col. 7, lines 44-52); and

when encoded data of the particular channel is not being stored in the storage medium, receive the particular channel of video and audio data directly from the transport demultiplexer, and decode the particular channel of video and audio data as it is received into the displayable format (Col. 6, lines 32-62).

However, Sie fails to explicitly disclose a transport demultiplexer coupled to the demodulator so as to receive the multiplexed transport stream directly from the demodulator, the transport demultiplexer being adapted to demultiplex the transport stream and isolate a particular channel of video and audio data.

In an analogous art, Ten Kate discloses a system (figure 1) for receiving digital programming content comprised of multiple channels (Col. 3, lines 36-55), the system comprising: a transport demultiplexer (4 – figure 1) coupled to the demodulator (3 – figure 1) so as to receive the multiplexed transport stream directly from the demodulator, the transport demultiplexer being adapted to demultiplex the transport stream and isolate a particular channel of video and audio data (Col. 3, lines 48-55 and Col. 4, lines 27-31). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system disclosed by Sie to include a transport demultiplexer coupled to the demodulator and adapted to receive the multiplexed transport stream directly from the demodulator as taught by Ten Kate, for

the benefit of selecting a desired channel based on instructions received directly from the demodulator and increasing system usability.

As for Claim 23, Sie and Ten Kate disclose, in particular Ten Kate teaches wherein the particular channel of video and audio data isolated by the transport demultiplexer has a digital format (Col. 3, line 50 to Col. 4, line 5 and Col. 4, lines 38-48).

As for Claim 24, Sie and Ten Kate disclose, in particular Sie teaches wherein the displayable format is analog (Col. 6, lines 34-37).

As for Claim 25, Sie and Ten Kate disclose, in particular Sie teaches wherein the isolated particular channel is compressed (Col. 6, lines 30-31).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chris Parry whose telephone number is (571) 272-8328. The examiner can normally be reached on Monday through Friday, 8:00 AM EST to 4:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on (571) 272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Chris Parry
Examiner
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/CP/



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